# Estimating some unavailable SDG indicators in Egypt*

**Saad Mohamed Kandil**
Second Statistician, CAPMAS
Email: kandil.stat@gmail.com

## Abstract

In 2015, United Nations launched the global 2030 Agenda for Sustainable Development Goals (SDGs) aimed at ending poverty in all its forms; respect, protect and promote human rights; empowerment of women and of vulnerable and disabilities persons. The Agenda consists of 17 SDG Goals, 169 targets and 232 indicators. In Egypt, Ministry of Planning, Monitoring and Administrative Reform (MPMAR) and Central Agency for Public Mobilization and Statistics (CAPMAS) are leading an update and review the SDG indicators, in this context were issued the national statistical report on the SDG indicators and report of Egypt′s voluntary national review in 2018. According to the two reports, there are 64.3% of SDGs indicators are not estimated. Only 35.7% are available. The paper works on estimating some of these indicators through using microdata of household income, expenditure and consumption survey.

**Keywords:** Poverty line, Health expenditure, consumption and welfare measurements.

# تقدير بعض مؤشرات أهداف التنمية المستدامة غير المتوفرة في مصر

**سعد محمد قنديل**
**الجهاز المركزي للتعبئة العامة والإحصاء- جمهورية مصر العربية**

**المستخلص:** في عام 2015، أطلقت الأمم المتحدة خطة 2030 العالمية لأهداف التنمية المستدامة (SDGs) التي تهدف إلى القضاء على الفقر بجميع أشكاله؛ احترام حقوق الإنسان وحمايتها وتعزيزها؛ تمكين المرأة والأشخاص المستضعفين وذوي الإعاقة. تتكون الأجندة من 17 هدفا من أهداف التنمية المستدامة و169 غاية و 232 مؤشرا. في مصر، تقود وزارة التخطيط والمتابعة والإصلاح الإداري (MPMAR) والجهاز المركزي للتعبئة العامة والإحصاء (CAPMAS) تحديثًا ومراجعة لمؤشرات أهداف التنمية المستدامة، وفي هذا السياق تم إصدار التقرير الإحصائي الوطني حول مؤشرات وتقرير أهداف التنمية المستدامة. من المراجعة الوطنية الطوعية لمصر في 2018. وفقًا للتقريرين، هناك 64.3٪ من مؤشرات أهداف التنمية المستدامة غير مقدرة. فقط 35.7٪ متوفرة. تعمل الورقة على تقدير بعض هذه المؤشرات من خلال استخدام البيانات الجزئية لمسح دخل وإنفاق واستهلاك الأسرة.

**الكلمات المفتاحية: خط الفقر، الإنفاق الصحي، قياسات الاستهلاك والرفاهية.**

(*) The paper is result of preparing a project paper in course training "Innovations in Use of New Data Sources and Methodologies for SDG Statistics" was conducted jointly by Japan International Cooperation Agency (JICA) and the United Nations Statistical Institute for Asia and the Pacific (SIAP) in Japan from 23 Jan 2019 to 9 Mar 2019. The training course conducted to strengthen the capability of national statistical systems to produce and analyze data and statistics for monitoring and assessing social and economic progress in developing countries.

ISSN (1681- 6870)

## 1. Introduction

The world faces many challenges as rising inequalities, poverty, and climate change. The millennium development goals (MDGs) have played a great role in the decreasing size of people who suffering from extreme poverty and reducing the hunger, preventable death and illness [3]. In 2015, the United Nations summit launched the global 2030 Agenda for Sustainable Development Goals (SDGs). In the same year, the UN adopted the Addis Ababa agenda for financing development and Paris agreement for climate change. The Agenda consists of 17 SDG Goals, 169 targets and 232 indicators. In February 2016, Egypt launched its first-ever sustainable development strategy "SDS", Egypt Vision 2030, aligning with the 17 SDGs and the African Agenda 2063. Ministry of Planning, Monitoring and Administrative Reform (MPMAR) is leading an update and review process of the strategy to ensure projects' compliance with the criteria of sustainability and all projects links submitted by public entities to the goals and key performance indicators of the SDS.

Central Agency for Public Mobilization and Statistics (CAPMAS), a member of the Inter-agency and Expert Group on SDG Indicators (IAEG-SDGs), plays a pivotal role in the monitoring process of the SDG and the SDS through its sustainable development unit. The unit published it's the first national statistical report on the SDG indicators and participated in Egypt′s voluntary national review report. According to the two reports, 64.3% of SDG indicators are not estimated while only 35.7% are presently available. This paper works on estimating four indicators by using microdata Household Income, Expenditure and Consumption Survey (HIECS). The paper is organized as follows: Section 2 provides the selected indicators of SDGs. Section 3 purpose and methodology in section 4, then data in section 5. Section 6 the empirical results are given. Finally, the conclusion is given in section 7 and recommendations in section 8.

## 2. Selected Indicators

After reviewing a list of the global SDG indicators [11] and the national and voluntary international reporting status of SDG indicators for Egypt, there are 125 unavailable indicators (Appendix: A4) and 13 are not applicable to Egypt [1]. Some of these indicators are related to household's expenditure or income, therefore they link to surveys of the household budget [7]. In table 2, there is full information about the selected indicators; that are not available in Egypt until now.

There is a definition of unknown source in classification SDG status, which means the national indicators are listed in the global database but have not been issued by national statistics organizations [6]. In the global database, data are available for the indicators' number 1.1.1; 3.8.2 and 10.1.1, thus it is expected at estimated selected indicators differ with global sources and disaggregation with the comparison of the same sources.

Table 2.1: The Selected indicators

| Status | I1.1.1 | I3.8.2 | I10.1.1 | I10.2.1 |
|---|---|---|---|---|
| Goals | 1: End poverty in all its forms everywhere | 3: Ensure healthy lives and promote well-being for all at all ages | 10: Reduce inequality within and among countries | 10: Reduce inequality within and among countries |
| Target | 1.1: By 2030, eradicate extreme poverty for all people everywhere, currently measured as people living on less than $1.25 a day | 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all | 10.1: By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average | 10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status |
| Indicator | 1.1.1: Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural) | 3.8.2: Proportion of population with large household expenditures on health as a share of total household expenditure or income | 10.1.1: Growth rates of household expenditure or income per capita among the bottom 40 per cent of the population and the total population | 10.2.1: Proportion of people living below 50 per cent of median income, by sex, age and persons with disabilities |
| Tier Classification[1] | TierI | TierI | TierII | TierII |
| Country Database[2] | Not Available | Not Available | Not Available | Not Available |
| Global Database Source[3] | ILO and World Bank estimates | World Bank Standardized Household Expenditure Surveys | World Bank Standardized Household Expenditure Surveys | Not Available |

Source: ([1]) [8]; ([2]) [1, 5] and ([3]) [10].

## 3. Purpose

The purpose of the paper is to estimate and interprets reasons for disparities for the selected indicators in Egypt. The basic objective of the paper is specified as follows (1) Estimating indicators number 1.1.1, 3.8.2, 10.1.1 and 10.2.1 on aggregate level, (2) disaggregated by income, gender, age, disability and geographic location,

ISSN (1681- 6870)

or other possible characteristics and (3) interpret and understand reasons of disparities in the selected indicators.

## 4. Methodology

This paper studies theoretical concepts and definitions of indicators and its estimates, then calculate the indicators. There are two options in some selected indicators to estimate using expenditure or income of household/individuals. Most of the case total expenditure is used as a proxy of income for two reasons: expenditure tends to be more accurately reported; income may be subject to transitory fluctuations since savings allow smoothening of expenditure over time [4]. Therefore, the paper used total expenditure was used instead of income in calculating selected indicators.

## 5. Meta Data

The main source for calculation and analysis is HIECS 2012/2013 and 2015. The HIECS is conducted by Central Agency for public Mobilization and Statistics (CAPMAS) in Egypt and includes the variables of health consumption, total consumption, and total income for the household which can help to estimate the four indicators. A survey is conducted every two years since 2008/2009 until now; the available data are 50% from the raw data of HIECS 2012/2013 and 2015. Design sampling of HIECS was carried out on a self-weighted two-stage stratified cluster sample, sample representative over governorates level, it has been proportionally distributed on the governorate level between urban and rural areas. The sample size was 15057 households in 2012/2013 and 23975 in 2015; thus there are 7528 households (32732 individuals) from 2012/2013 and 11988 (52254 individuals) in 2015. The unit sampling is household by its individuals.

The used weight is normalizing weight, where the sample represents the total household in the survey rather than represents the total Egyptian population. The map used to display data governorates level is obtained from the site of data.humdata.org. All results in tables and figures are extracted from HIECS 2012/2013 and 2015. The data processing is carried by using R program version 3.5.2 for calculation, analysis of indicators and plotting map at governorates level.

## 6. Empirical results

### 6.1. Indicator 1.1.1:

The percentage population below the international poverty line is defined as the proportion of the population living below less than $1.9 a day measured at 2011 international prices adjusted for Purchasing power parity "PPP" [11]. According to World Bank (WB), the international line for individual in household consists of value of dollar in day (1.25 before 2011 and 1.9 from 2011) multiply by value of PPP exchange rates for household final consumption expenditure for Egypt multiply by 1+the increase in Consumer Price Index (CPI) after base year of PPP 2011.

There are some issues related to CPI construction relevant to estimating the international poverty: the quality of CPI data varies significantly across countries with many potential sources of error, technical issues regarding to the used weight and calculation method. Therefore, the best choice is not always evident, WB use the World Development Indicators (WDI) series on the CPI for 104 countries in poverty estimates [12], where PovcalNet is an interactive computational tool that allows users to know these internationally comparable $1.90 a day global and country-level poverty line estimates (UNSD, 2019a). In line with the orientation of estimating indicators using Egyptian data, this paper estimates the international poverty line using the Egyptian data (values of components line in Appendix: A1). The annual international poverty line equals 1525.46 Egyptian pounds for an individual in 2012/2013 and 1938.09 in 2015.

Table 6.1: % population below the international poverty line, disagreed by

| 2012/2013 | | 2015 | |
|---|---|---|---|
| Status | %Poor | Status | %Poor |
| Gender (Individuals) | | | |
| Male | 0.31 | Male | 0.08 |
| Female | 0.46 | Female | 0.13 |
| Income per capita (Individuals) | | | |
| <20% [<3930] | 1.76 | <20% [<3930] | 1.77 |
| 20-40% [3934-5000] | 0 | 20-40% [3930-5000] | 0 |
| 40-60% [5000-6300] | 0 | 40-60% [5000-6300] | 0 |
| 60-80% [6300-8560] | 0 | 60-80% [6300-8560] | 0 |
| 80-100% [8560.0+] | 0 | 80-100% [8560+] | 0 |
| Age Group (Individuals) | | | |
| <15 | 0.62 | <15 | 0.19 |
| 15-24 | 0.30 | 15-24 | 0.08 |
| 24-65 | 0.25 | 24-65 | 0.06 |
| 65+ | 0.34 | 65+ | 0.09 |
| Employment Status (Individuals) | | | |
| Works | 0.21 | Works | 0.06 |

ISSN (1681- 6870)

| | | | |
|---|---|---|---|
| Unemployed | 0.13 | Unemployed | 0 |
| Outside the workforce | 0.42 | Outside the workforce | 0.12 |
| Outside human resources | 0.64 | Outside human resources | 0.18 |
| Gender of Head Household | | | |
| Male | 0.21 | Male | 0.05 |
| Female | 0.49 | Female | 0.11 |
| Urban/Rural (Individuals) | | | |
| Urban | 0.18 | Urban | 0.07 |
| Rural | 0.52 | Rural | 0.14 |
| Disability (Individuals) | | | |
| | | YES | 0 |
| | | NO | 0.11 |

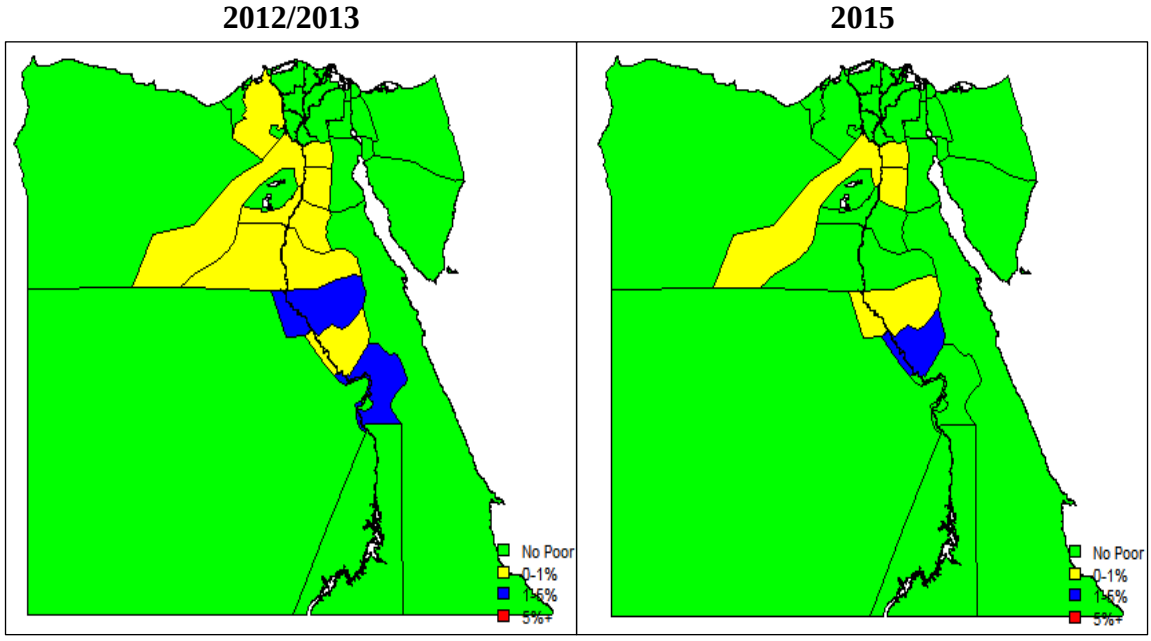


Figure 6.1: % international poverty line by governorates level

The WB declared value 2.3% in 2012 and 1.3% in 2015 while the estimated indicator is 0.39% in 2012 and 0.11% in 2015. Although, the value of the indicator in Egypt has reduced, there is still some inequality across location (at urban/rural, governorates) level. Egypt suffered from financial risk in 2008 and the revolution in 2011 and 2013 caused retreat in growth where eight governorates suffered from extreme poverty, especially the rural areas. The value of the indicator in 2015 reduced and only four governorates (Figure 6.1 & A2), Egypt still suffer from political changes and directed development projects towards the north and urban governorates.

## 6.2. Indicator 3.8.2:

This indicator focuses on health expenditures to identify financial hardship caused by direct health care payments; there are two thresholds to define large household expenditure on health greater than 10% and greater than 25% of total household expenditure or income. As indicator 1.1.1 is estimated by using the expenditure of the household. The disaggregation is done by using threshold 10% of total household expenditure (In A5: disaggregation using threshold 25%), the possible disaggregation at the level: gender and age of the head of the household, geographic location (rural/urban and governorates), quintiles of the total household income.

According to data from international source (Database for global SDG indictors), the percentage of households spending 25% or more is 3.9% in the year 2012 while the estimated value is 5.27% for the year 2012 and 6.81 for 2015. The indicator was disaggregated at 10% of spending at the national level was 30.93% in 2012 and 34.47% in 2015. Table 6.2 displays the percentage by disaggregation for inequality at gender and age of head household, governorates and increase in the number of governorates that have spent 10% or more to spend 25% or more from the years 2012 to 2015.

Table 6.2: % Household have health expenditures 10%+, disaggregated by

| 2012/2013 | | 2015 | |
|---|---|---|---|
| Status | 10% Health share | Status | 10% Health share |
| Gender of Head Household | | | |
| Male | 29.65 | Male | 33.04 |
| Female | 36.85 | Female | 41.05 |
| Household Income | | | |
| <20% [<17300] | 30.43 | <20% [<24200] | 36.13 |
| 20-40% [17300-22900] | 28.58 | 20-40% [24200-31800] | 30.48 |
| 40-60% [22900-28800] | 30.67 | 40-60% [31800-40600] | 36.17 |
| 60-80% [28800-38400] | 31.97 | 60-80% [40600-54900] | 32.73 |
| 80-100% [38400+] | 32.97 | 80-100% [54900+] | 36.85 |
| Age of Head Household | | | |
| 15-24 | 25.77 | 15-24 | 23.57 |
| 24-65 | 28.18 | 24-65 | 30.54 |
| 65+ | 47.54 | 65+ | 55.84 |
| Urban/Rural Household | | | |
| Urban | 29.93 | Urban | 34.33 |
| Rural | 31.74 | Rural | 34.6 |
| National poverty poor | | | |
| Poor | 18.08 | Poor | 21.36 |
| Non-Poor | 34.16 | Non-Poor | 37.93 |

ISSN (1681- 6870)

There are 7 governorates out of 27 their households reach up to 35% or more, four from the seven increased the percentage in 2015 (Dakahlia, Kafr Elsheikh, Galyubia and sharqia) as in figure 6.3. The most effective private or public hospitals are located in capital or in the main governorates like Giza and Alexandria.

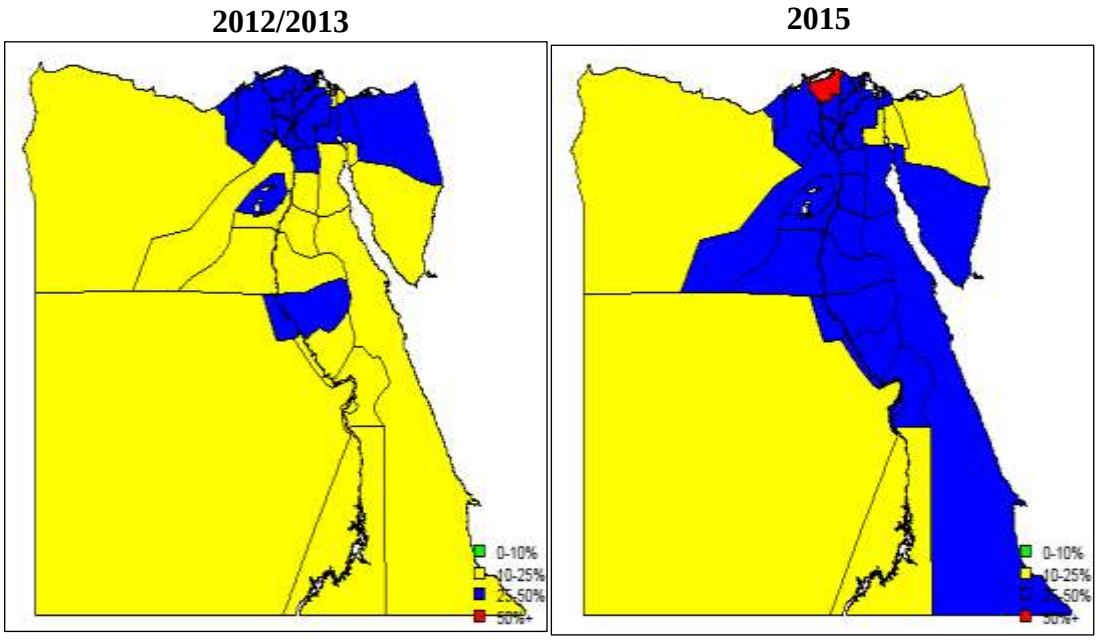


Figure 6.2: %households with large household expenditures on health (greater than 10%) by governorates level

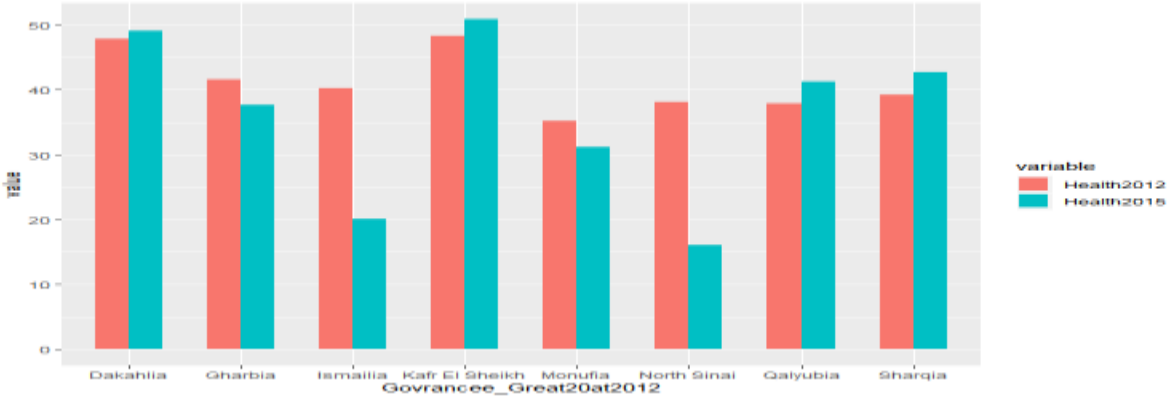


Figure 6.3: % governorates (greater than 10%) have more than 35% from total households

## 6.3. Indicator 10.1.1:

The indicator is computed as the annualized average growth rate in per capita real consumption or income of the bottom 40% and the national average of the income distribution in a country from household surveys over a roughly 5-year period. Choice of the bottom 40% of the population is depended on the welfare distribution (total income). To achieve sustainable improvements, require both a growing economy with consideration of equity. In an inclusive society, it is not sufficient to raise everyone above an absolute minimum standard of living; thus it must be ensured that economic growth increases prosperity among the poor over time [9]. According to a handbook of indicators, this indicator has not recommended disaggregation level yet.

The WB estimated for growth rate for the bottom 40% in 2012 to be 2.58 and 0.78 for the total population. The estimated growth rate between 2012 and 2015 is 12.67 for bottom 40% of total population while the growth rate of the total is 16.40, which meant that inequality in growth rate especially the Egyptian government follows policies of WB. These policies are reducing the budget deficit and rationalize support to achieve radical structural reforms in the economy and are expected to continue in the near term until the effects of the policies change come into effect.

Table 6.3: Growth rates of household expenditure among the bottom 40% of the population and total population

| Year | Bottom40 | Rest | Total | ΔBottom40 | ΔRest | ΔTotal |
|---|---|---|---|---|---|---|
| 2012/2013 | 5449.88 | 7834.48 | 6884.13 | | | |
| 2015 (Nominal) | 7798.37 | 11761.66 | 10176.47 | 43.09 | 50.13 | 47.83 |
| (Real change=1+Δ=1.27) | 6140.45 | 9261.15 | 8012.97 | 12.67 | 18.21 | 16.40 |

ISSN (1681- 6870)

## 6.4. Indicator 10.1.2:

Table 6.4: %people living below 50% of median expenditure

| 2012/2013 | | 2015 | |
|---|---|---|---|
| Status | %Poor | Status | %Poor |
| Gender (Individuals) | | | |
| Male | 6.29 | Male | 7.72 |
| Female | 7.09 | Female | 8.25 |
| Income per capita (Individuals) | | | |
| <20% [<3930] | 31.52 | <20% [<3930] | 77.40 |
| 20-40% [3934-5000] | 1.51 | 20-40% [3930-5000] | 22.58 |
| 40-60% [5000-6300] | 0.33 | 40-60% [5000-6300] | 5.39 |
| 60-80% [6300-8560] | 0.06 | 60-80% [6300-8560] | 0.80 |
| 80-100% [8560.0+] | 0 | 80-100% [8560+] | 0.12 |
| Age Group (Individuals) | | | |
| <15 | 9.60 | <15 | 11.99 |
| 15-24 | 6.66 | 15-24 | 7.44 |
| 24-65 | 4.79 | 24-65 | 6.03 |
| 65+ | 4.43 | 65+ | 4.13 |
| Employment Status (Individuals) | | | |
| Works | 4.53 | Works | 7.27 |
| Unemployed | 3.3 | Unemployed | 4.07 |
| Outside the workforce | 7.46 | Outside the workforce | 9.23 |
| Outside human resources | 8.78 | Outside human resources | 11.73 |
| Gender of Head Household | | | |
| Male | 4.71 | Male | 5.69 |
| Female | 3.16 | Female | 3.50 |
| Urban/Rural (Individuals) | | | |
| Urban | 2.65 | Urban | 3.38 |
| Rural | 9.53 | Rural | 11.48 |
| Disability (Individuals) | | | |
| | | YES | 7.72 |
| | | NO | 7.99 |

The proportion of people living below 50 per cent of median consumption is commonly used for poverty measurement in rich countries and is increasingly also used as a complementary measure of inequality and poverty in low- and middle- income countries. This indicator is a useful measure for monitoring the level and trends in social inclusion, poverty and inequality within a country. Until now, WB works to improve methodology and disaggregation of the indicator, the estimated indicator is disaggregated by gender; income per capita; age group; employment status; governorates; urban/rural and disability.

According to expenditure criteria, the percentage of people below 50% of median expenditure in 2012/2013 was 6.69% and 7.99 in 2015. Table 6.4 shows disaggregation of the indicator depending on expenditure. The percentage is reduced by income criteria to 4.25% and 5.8% respectively.

The main inequality in income per capita and urban/rural area, it expected inequality in rural area for historical accumulation of urban-oriented economic policies. The inequality

is displayed in table 6.4 in low income consists of the income and the expenditure level. At governorate's level from figure 6.3 and A2, Asyut is at a high level by 33.29% in 2012/2013 in comparison with Sohag in 2015 by 35.03%. The high level of people below 50% of median expenditure located in upper Egypt governorates which displayed in figure 6.4 below.

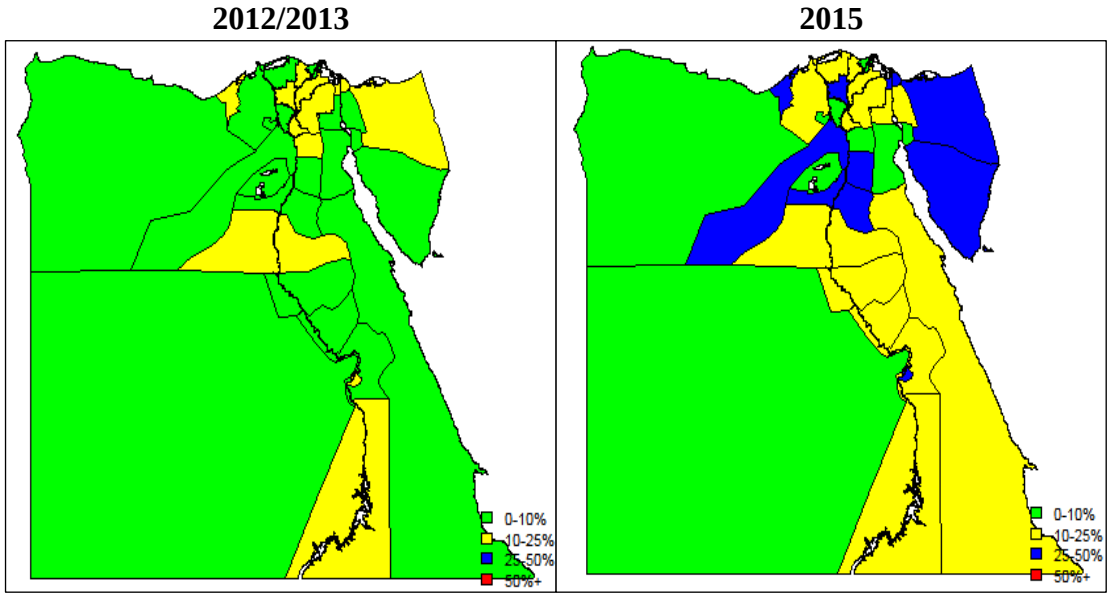


Figure 6.4: %people living below 50% of median expenditure by governorates level

## 6.4. Overview on indicators:

In this section, we discuss the inequality between governorates as per the percentage of estimated indicators in addition to the national poverty line (calculated by CAPMAS, see A2) and household budget share. In previous subsections the estimated international poverty line; health expenditure health share 10%; expenditure health share 25% and the percentage of population below 50% of median expenditure at households and governorates level.

The aggregated percentages for the indicators show three governorates suffered the most and which are Qalyubia; Asyut and North Sinai in 2012/2013. Amongst the governorates in Egypt, Asyut fared the worst results having the highest percentage of people below 50% of median expenditure and ranked 8th in spending's on health only 25%while Qalyubia ranked 7th in spending's on health with 10%, ranked 9th in spending on health 25% and the international poverty line. In 2015, changed the governorates in the first queue of suffering where Beheira governorates ranked 5 in international poverty and spend 25% on health followed by Giza governorates ranked 4 in international poverty and 9 in people below 50% of median expenditure and national poverty.

In figure 6.5, Budget expenditure share for international/national poverty, percentage of health expenditure share and percentage of below 50% median expenditure. There is some difference in the budget share of households only expenditure health share 25% full

ISSN (1681- 6870)

difference in 2012/2013, for international/national poverty the poor people spend more on food and spend less on education and transport than non-poor. Housing expenditure share is the same between poor and non-poor and minor differences between the rests of the spending shares. Naturally, the pattern of spending varies between households that spend 25% or more on health, so it is logical that the rest of the spending items for these households are compared to those with the lowest spending on health.


Figure 6.5: Budget expenditure share according to SDG indicators

In 2015, the same pattern continued, the food expenditure share suffered from the low share in spending 10% or 25% and more where reached to 28% in case spend 25% or more while reached to 38% for non -poor. In the international poverty line, the poor spend more than non-poor on food 52% to 41% and spend less on education and transport compare than non-poor, the same pattern in the national poverty line. In tables number (6.1, 6.2 and 6.4), there is clear inequality according to age group and employment status. Egypt is large average household sizes 4.34 persons per household in 2012/2013 and 4.27 in 2015, which mean more pressure on the head of household, therefore income/expenditure per capita lower especially percentage of persons less than 15 years is 32.9% and 30.62 in 2015. Also, the inequality in work status percentage of people out of the workforce is 47.75% in 2012/2013 and 50.23% in 2015.

## 7. Conclusions

Mainly, this paper aimed to estimate four unavailable SDG indicators until now in Egypt SDG framework. This aim was built on the basis that the estimates of the selected four indicators are related to expenditure household survey and with available raw data. The selected indicators were estimated and disaggregated three of them according to guidelines

of UNSD. Addition to show and analyze the different aspects of indicators according to characteristics: gender, income per capita, age group and location. Most of the inequity in value of indicators comes first in location characteristics than in gender and age groups.

Overall, the international poverty indicator improved from 2012 to 2015 while the other three indicators drawback. The International Poverty indicator has fallen from 0.39% to 0.11% in 2015 with there is inequality at governorates. Based on the threshold of health expenditure, the percentage of households spending on health increased. In 2015, household spending 10% or more from 30.93% in 2012 to 34.47%, and threshold 25% from 3.9% to 5.27% in 2015.The rate of growth of households is less than 40% of expenditure for the total population. In terms of the proportion of households less than 50% of the median expenditure increased from 6.69% to 7.99%.

The Upper Egypt governorates suffer from a lack of development in human and land in favor of the central and northern governorates, as a result of the accumulation of various government policies in development and investment. In addition, Egypt has a history of financial crisis since 2008 to big internal events between 2011 and 2013, which contributed to the suffering of the entire state in the political or economic aspects. With the government's commitment to its 2030 National Strategy and the UN's 20130 Global Agenda, it is expected that Egypt will pursue with time and achieve its objectives.

## 8. Recommendations

Based on the empirical results, we can conclude that the ability to estimate the four indicators in Egypt are thus increasing the level of reporting in Egypt and more efficient monitoring of the global sustainable development agenda. The indicators' examination process in a continuous process, therefore Egypt needs to evaluate the status of indicators and using the methodology used in Japan voluntary SDG report to classify the indictors are not estimated. CAPMAS should make more effort to find proxy indicators in case of unavailability of indicators, other solutions to estimate the indicator according to available guidelines, especially with the recommendation at the eighth meeting of IAEG-SDGs by this.

ISSN (1681- 6870)

## References

[1] CAPMAS, The national statistical report for monitoring the SDG indicators. Egypt, 2018.

[2] CAPMAS, Bulletin of indices of consumer prices, Egypt, Jan 2018.

[3] UNDP, From the MDGs to Sustainable Development for All: Lessons from 15 Years of Practice, 2016.

[4] S. M. Kandil, Allocation Models with Application to Consumer Demand Theory: Case Study (Egypt), Thesis (Master), Cairo University, 2013.

[5] Ministry of Planning, Monitoring and Administrative Reform "MPMAR", Egypt′s Voluntary National Review, 2018.

[6] SDGs Promotion Headquarters, Japan's Voluntary National Review: Report on the implementation of the Sustainable Development Goals, 2017.

[7] SIAP, Lectures Training Programme on Innovations in Use of New Data Sources and Methodologies for SDG Statistics, Japan, 2019.

[8] UNSD, Tier Classification for Global SDG Indicators. [Site: https://unstats.un.org/sdgs/iaeg-sdgs/tier-classification], 2018.12.25.

[9] UNSD, E-Handbook on SDG Indicators.

[Site: https://unstats.un.org/wiki/display/SDGeHandbook], 2019.02.02

[10] UNSD, Database for Global SDG Indicators.

[Site: https://unstats.un.org/sdgs/indicators/database], 2019.02.02.

[11] UNSD, list of the global SDG indicators.

[Site: https://unstats.un.org/sdgs/indicators/indicators-list], 2019.02.02.

[12] WB, International Comparison Program (ICP) 2011. [http://www.worldbank.org/en/programs/icp], 2019.2.6.

[13] WB, PovcalNet database. [http://iresearch.worldbank.org/PovcalNet/povDuplicateWB.aspx], 2019.2.9.

## Appendixes

A1: Information of Poverty Line Components

| Period | Jan 2011 | June 2013 | Dec 2015 |
|---|---|---|---|
| CPI Value[1] | 110.8 | 134.8 | 171.7 |
| Δ | - | 0.22 | 0.55 |
| 1+Δ | - | 1.22 | 1.55 |
| Line Poverty Yearly: Egypt Data using (1.9 and PPP=1.803) | - | 1525.46 | 1938.09 |
| PovcalNet (Mean $/Month)[2] | | 163.32 | 183.13 |
| Line Poverty Yearly: PovcalNet Data using (1.9, PPP=1.803 and mean*12) | | 1959.84 | 2197.56 |

**Source: ([1]) (CAPMAS, 2018b) & ([2]) (WB, 2019b)**

**ISSN (1681- 6870)**

A2: Estimated Indicators by governorates Level

| Governorates | International poverty line | | Expenditure Health Share 10% | | Expenditure Health Share 25% | | Blow 50% of median expenditure | | National poverty line (Calculated by CAPMAS) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 2012/ 2013 | 2015 | 2012/ 2013 | 2015 | 2012/ 2013 | 2015 | 2012/ 2013 | 2015 | 2012/ 2013 | 2015 |
| Cairo | 0.4 | 0.26 | 26.78 | 33.65 | 5.5 | 7.95 | 2.19 | 2.30 | 17.67 | 17.82 |
| Alexandria | 0 | 0 | 34.76 | 31.36 | 6.98 | 7.75 | 1.83 | 1.49 | 13.52 | 11.68 |
| Port Said | 0 | 0 | 24.1 | 29.59 | 3.23 | 3.64 | 0.00 | 0.00 | 18.74 | 6.59 |
| Suez | 0 | 0 | 22.68 | 31.97 | 1.63 | 5.77 | 0.00 | 0.75 | 9.64 | 18.07 |
| Damietta | 0 | 0 | 28.08 | 45.96 | 4.3 | 11.84 | 0.00 | 3.18 | 10.03 | 19.69 |
| Dakahlia | 0 | 0 | 47.86 | 49.14 | 9.87 | 9.11 | 1.03 | 1.33 | 14.80 | 12.77 |
| Sharqia | 0 | 0 | 39.31 | 42.69 | 8.31 | 6.66 | 0.96 | 1.58 | 13.34 | 16.28 |
| Qalyubia | 0 | 0 | 37.94 | 41.32 | 4.85 | 9.47 | 1.60 | 1.33 | 19.45 | 13.71 |
| Kafr El Sheikh | 0 | 0 | 48.38 | 50.87 | 10.5 | 12.27 | 0.00 | 3.30 | 16.44 | 21.02 |
| Gharbia | 0 | 0 | 41.59 | 37.65 | 8.86 | 5.71 | 0.97 | 1.77 | 11.48 | 17.46 |
| Monufia | 0 | 0 | 35.27 | 31.24 | 3.69 | 4.81 | 1.47 | 1.83 | 14.55 | 14.84 |
| Beheira | 0.13 | 0 | 26.2 | 38.14 | 3.8 | 7.96 | 1.57 | 3.85 | 20.93 | 24.54 |
| Ismailia | 0 | 0 | 40.33 | 20.07 | 4.28 | 3.45 | 0.00 | 5.67 | 10.72 | 22.06 |
| Giza | 0.24 | 0.16 | 22.71 | 30.92 | 3.17 | 7.59 | 10.98 | 9.01 | 30.51 | 28.71 |
| Beni Suef | 0.44 | 0 | 23.98 | 27.35 | 4.05 | 4.94 | 11.64 | 11.51 | 42.70 | 41.88 |
| Faiyum | 0 | 0 | 29.37 | 26.16 | 3.03 | 4.09 | 7.77 | 9.25 | 35.41 | 34.45 |
| Minya | 0.23 | 0 | 21.35 | 25.47 | 2.43 | 3.72 | 6.41 | 25.28 | 29.86 | 58.00 |
| Asyut | 3.23 | 0.47 | 29.6 | 25.44 | 5.11 | 5.16 | 33.29 | 29.80 | 60.87 | 66.76 |
| Sohag | 0.64 | 1.35 | 12.97 | 29.85 | 1.58 | 5.85 | 18.94 | 35.03 | 56.63 | 64.07 |
| Qena | 2.52 | 0 | 22.75 | 26.22 | 3.02 | 3.44 | 23.67 | 20.63 | 57.28 | 59.74 |
| Aswan | 0 | 0 | 18.64 | 19.75 | 1.64 | 2.29 | 4.74 | 15.90 | 44.14 | 48.77 |
| Luxor | 0 | 0 | 24.67 | 29.98 | 3.69 | 3.01 | 12.55 | 7.46 | 40.54 | 43.48 |
| Red Sea | 0 | 0 | 17.09 | 31.16 | 0 | 3.93 | 0.00 | 0.00 | 0.00 | 6.75 |
| New Valley | 0 | 0 | 11.44 | 18.41 | 0 | 0.89 | 0.00 | 1.33 | 21.76 | 9.52 |
| Matruh | 0 | 0 | 10.66 | 10.95 | 0 | 0.86 | 16.55 | 23.61 | 23.40 | 56.60 |
| North Sinai | 0 | 0 | 38.2 | 16.07 | 9.86 | 1.35 | 8.45 | 5.42 | 52.20 | 25.26 |
| South Sinai | 0 | 0 | 22.81 | 4.44 | 0 | 0 | 0.00 | 0.00 | 0.00 | 3.98 |

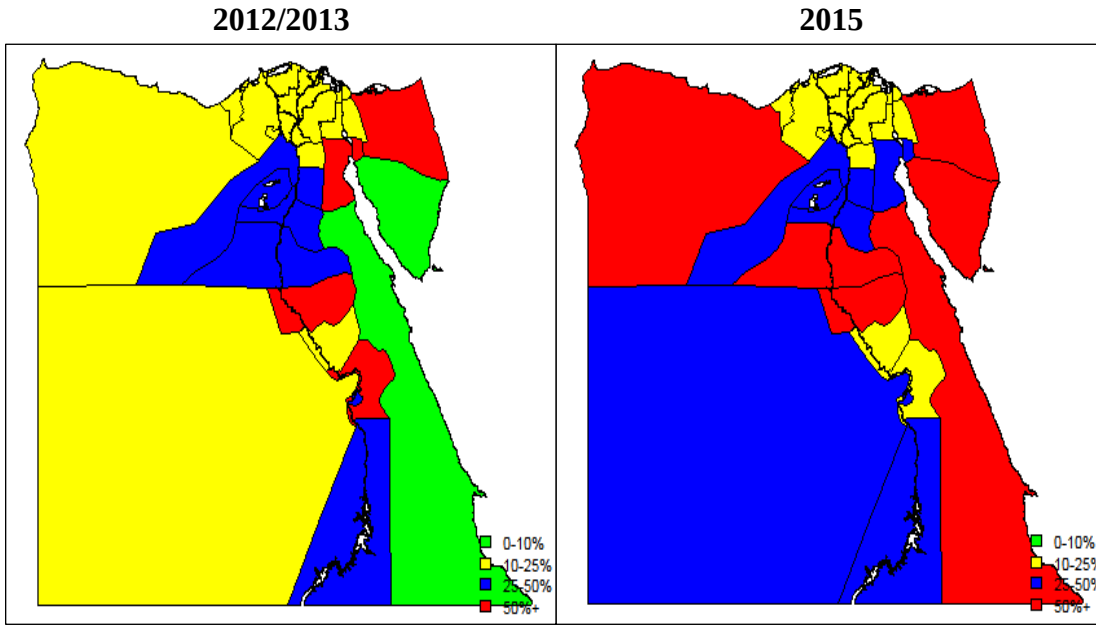


Figure A3.1: % National poverty line by governorates level

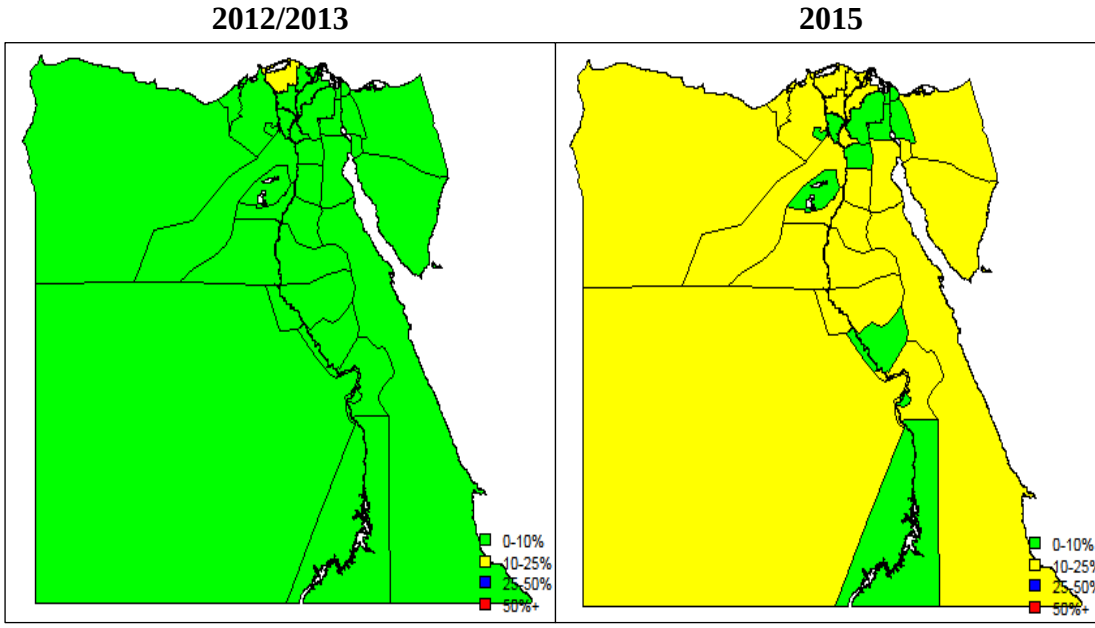


Figure A3.2: % %households with large household expenditures on health (greater than 25%) by governorates level

**ISSN (1681- 6870)**

A4: List of Unavailable Indicators (Egypt)
For full list of unavailable indicators: http://www.egyptsdgobservatory.info/

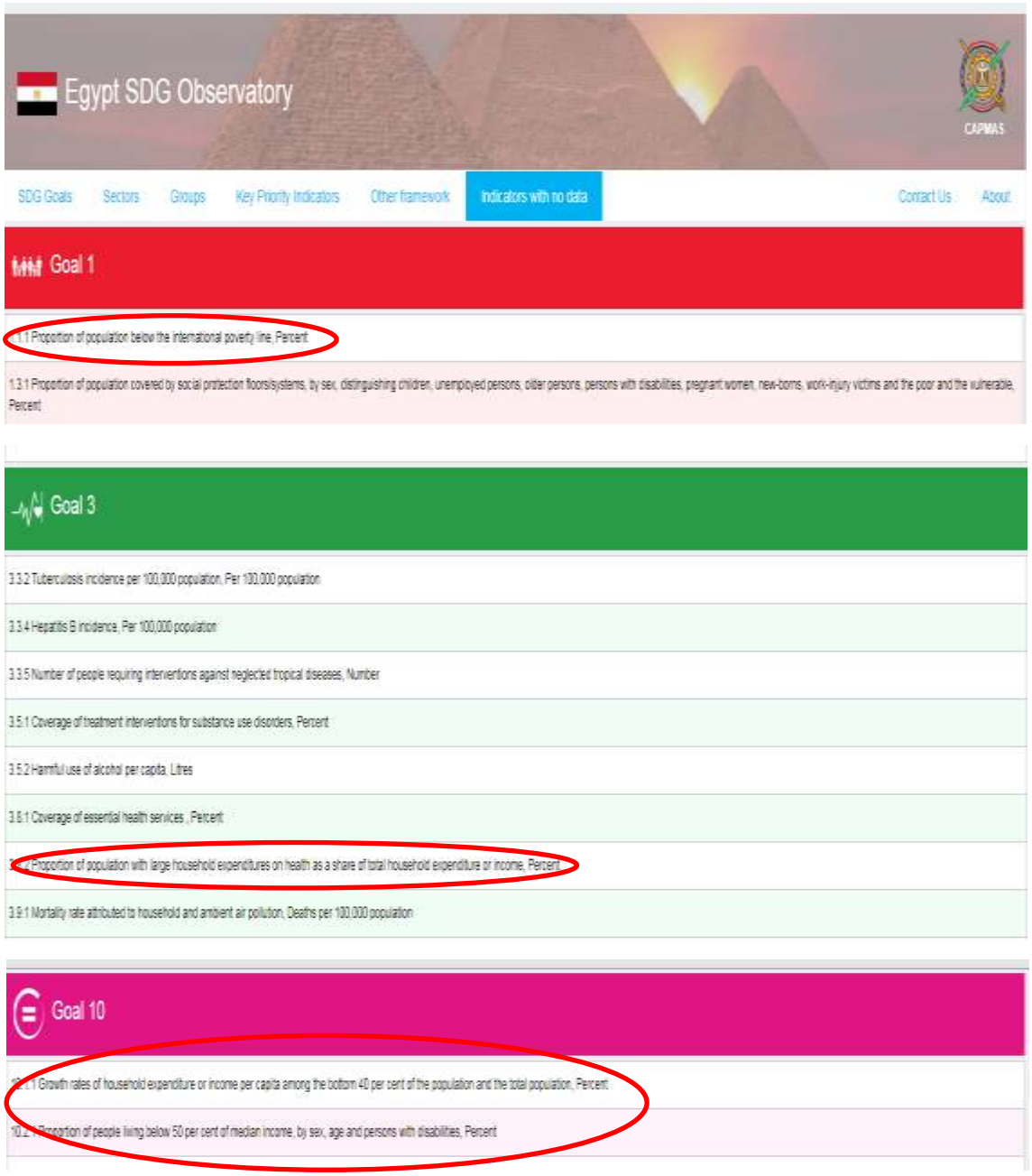

Table A5: % Household have health expenditures 25%+, disagreed by

| 2012/2013 | | 2015 | |
|---|---|---|---|
| Status | 10% Health share | Status | 10% Health share |
| Gender of Head Household | | | |
| Male | 4.59 | Male | 6.32 |
| Female | 8.43 | Female | 9.05 |
| Household Income | | | |
| <20% [<17300] | 6.13 | <20% [<24200] | 8.30 |
| 20-40% [17300-22900] | 4.34 | 20-40% [24200-31800] | 5.47 |
| 40-60% [22900-28800] | 4.91 | 40-60% [31800-40600] | 5.49 |
| 60-80% [28800-38400] | 4.45 | 60-80% [40600-54900] | 6.13 |
| 80-100% [38400+] | 6.49 | 80-100% [54900+] | 8.60 |
| Age of Head Household | | | |
| 15-24 | 8.2 | 15-24 | 3.61 |
| 24-65 | 3.95 | 24-65 | 5.03 |
| 65+ | 12.85 | 65+ | 16.38 |
| Urban/Rural ( Household ) | | | |
| Urban | 5.79 | Urban | 7.68 |
| Rural | 4.85 | Rural | 6.07 |
| National poverty poor | | | |
| Poor | 1.25 | Poor | 1.56 |
| Non-Poor | 6.28 | Non-Poor | 8.19 |